

What Is Claimed Is:

1 1. A method to facilitate debugging a platform-independent virtual
2 machine, comprising:
3 providing an agent on the platform-independent virtual machine, wherein
4 the agent provides a set of functions for accessing a plurality of variables in the
5 platform-independent virtual machine;
6 adapting the platform-independent virtual machine to call the set of
7 functions within the agent;
8 examining a current state of the plurality of variables in the platform-
9 independent virtual machine using the agent; and
10 communicating the current state of the plurality of variables to a host
11 machine, wherein an operator of the host machine can analyze the current state of
12 the plurality of variables.

1 2. The method of claim 1, wherein the agent includes a core portion
2 that is common across multiple platforms and a platform-specific portion for each
3 platform.

1 3. The method of claim 2, wherein the platform-specific portion
2 includes features and structures related to a specific platform-independent virtual
3 machine.

1 4. The method of claim 1, wherein adapting the platform-independent
2 virtual machine to call the set of functions within the agent involves inserting
3 checkpoints within executable code for the platform-independent virtual machine.

1 5. The method of claim 4, wherein a checkpoint uses the set of
2 functions to examine the current state of the plurality of variables and
3 communicate the current state of the plurality of variables to the host machine.

1 6. The method of claim 1, wherein communicating the current state of
2 the plurality of variables to the host machine involves using one of a direct
3 coupling and a network coupling.

1 7. The method of claim 1, wherein the agent only includes resources
2 for collecting data, thereby limiting memory usage of the agent.

1 8. A computer-readable storage medium storing instructions that
2 when executed by a computer cause the computer to perform a method to
3 facilitate debugging of a platform-independent virtual machine, the method
4 comprising:
5 providing an agent on the platform-independent virtual machine, wherein
6 the agent provides a set of functions for accessing a plurality of variables in the
7 platform-independent virtual machine;
8 adapting the platform-independent virtual machine to call the set of
9 functions within the agent;
10 examining a current state of the plurality of variables in the platform-
11 independent virtual machine using the agent; and
12 communicating the current state of the plurality of variables to a host
13 machine, wherein an operator of the host machine can analyze the current state of
14 the plurality of variables.

1 9. The computer-readable storage medium of claim 8, wherein the
2 agent includes a core portion that is common across multiple platforms and a
3 platform-specific portion for each platform.

1 10. The computer-readable storage medium of claim 9, wherein the
2 platform-specific portion includes features and structures related to a specific
3 platform-independent virtual machine.

1 11. The computer-readable storage medium of claim 8, wherein
2 adapting the platform-independent virtual machine to call the set of functions
3 within the agent involves inserting checkpoints within executable code for the
4 platform-independent virtual machine.

1 12. The computer-readable storage medium of claim 11, wherein a
2 checkpoint uses the set of functions to examine the current state of the plurality of
3 variables and communicate the current state of the plurality of variables to the
4 host machine.

1 13. The computer-readable storage medium of claim 8, wherein
2 communicating the current state of the plurality of variables to the host machine
3 involves using one of a direct coupling and a network coupling.

1 14. The computer-readable storage medium of claim 8, wherein the
2 agent only includes resources for collecting data, thereby limiting memory usage
3 of the agent.

1 15. An apparatus that facilitates debugging of a platform-independent
2 virtual machine, comprising:
3 a providing mechanism that is configured to provide an agent on the
4 platform-independent virtual machine, wherein the agent provides a set of
5 functions for accessing a plurality of variables in the platform-independent virtual
6 machine;
7 an adapting mechanism that is configured to adapt the platform-
8 independent virtual machine to call the set of functions within the agent;
9 an examining mechanism that is configured to examine a current state of
10 the plurality of variables in the platform-independent virtual machine using the
11 agent; and
12 a communicating mechanism that is configured to communicate the
13 current state of the plurality of variables to a host machine, wherein an operator of
14 the host machine can analyze the current state of the plurality of variables.

1 16. The apparatus of claim 15, wherein the agent includes a core
2 portion that is common across multiple platforms and a platform-specific portion
3 for each platform.

1 17. The apparatus of claim 16, wherein the platform-specific portion
2 includes features and structures related to a specific platform-independent virtual
3 machine.

1 18. The apparatus of claim 15, further comprising an inserting
2 mechanism that is configured to insert checkpoints within executable code for the
3 platform-independent virtual machine.

1 19. The apparatus of claim 18, wherein a checkpoint uses the set of
2 functions to examine the current state of the plurality of variables and
3 communicate the current state of the plurality of variables to the host machine.

1 20. The apparatus of claim 15, wherein communicating the current
2 state of the plurality of variables to the host machine involves using one of a direct
3 coupling and a network coupling.

1 21. The apparatus of claim 15, wherein the agent only includes
2 resources for collecting data, thereby limiting memory usage of the agent.